## REMARKS

Reconsideration of the present application, in view of the arguments presented herein, is respectfully requested.

## I. STATUS OF THE CLAIMS

Claims 1-6 and 9-12 are pending in this application.

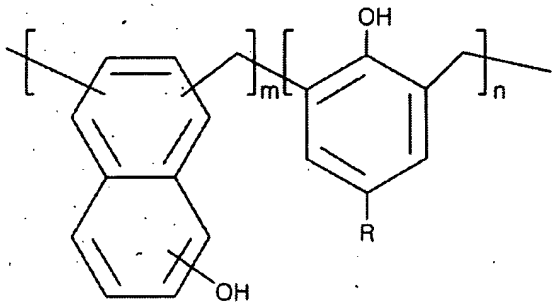
## II. Claim Rejection under 35 U.S.C. §103

Claims 1-6 and 9-12 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent Application Publication No. JP 2002-014474 to Sato et al (hereinafter Sato) in view of its English language machine translation.

To establish prima facie obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the cited reference or references. **(See MPEP 2143.03; In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).**

In response, the Sato reference fails to teach or suggest all of the features recited in claim 1.

In particular, the Sato reference at the very least fails to teach or suggest a composition for a bottom-layer resist, comprising a polymer represented by the formula:




wherein R is hydrogen or a methyl group, m/(m+n) is about 0.5 to about 1.0 and n/(m+n) is greater than 0 but less than or equal to 0.5, a thermal acid generator (TAG) and a cross-linker, as recited in claim 1.

In particular, Sato at the very least fails to teach or suggest a composition for a bottom-layer resist which includes a polymer comprising a hydroxynaphthanlene compound bonded to a hydroxybenzene compound as recited in claim 1 of the presently claimed invention. Sato describes using dehydration condensation of either certain naphthol derivatives and formaldehyde or alternatively dehydration condensation of certain anthracene derivatives and formaldehyde to form certain novolak compounds for producing a lower layer film. However, none of the compounds or polymers mentioned in Sato comprises a hydroxynaphthanlene compound bonded to a hydroxybenzene compound as recited in claim 1 of the presently claimed invention.

With regard to the statement **on page 2 of the instant Office Action** that Sato teaches that additional momoners such as the phenol monomers represented by formula 13 in Sato may be combined with naphthol monomers in forming its novolak resins for its lower layer film, Applicants respectfully disagree. In particular, the phenol momoners of formula 13 in Sato are indeed being used to form a lower layer film but contrary to the above statement in the instant Office Action, these phenol monomers are not being combined with naphthol monomers. **(See page 7, paragraphs [0058]-[0061] of Sato).** Rather, Sato mentions combining naphthol derivatives with certain formaldehydes, but there is no teaching or suggestion in Sato of combining naphthol with phenol monomers or hydroxybenzene compounds in forming its novalok resins for its lower layer film. In addition, it is further noted that the above-mentioned material described in Formula 13 of Sato is being used in a comparative Example which indicates that the embodiments of Sato exclude the material of formula 13 and therefore combining a naphthol monomer with a phenol monomer is not obvious in view of the teachings of Sato.

Consequently, Sato thus at the very fails to teach or suggest a composition for a bottom-layer resist which includes a polymer comprising a hydroxynaphthanlene compound bonded to a hydroxybenzene compound as recited in claim 1 of the presently claimed invention.

Moreover, besides failing to teach or suggest the above-mentioned polymer of the bottom layer resist of claim 1, Sato is also completely silent regarding using a cross-linker or a thermal acid generator as recited in claim 1.

Therefore, for at least the reasons set forth above, withdrawal of the above rejection to claim 1 is respectfully requested. As claims 2-6 depend from and incorporate all of the limitations of claim 1, withdrawal of the rejection to these claims is likewise respectfully requested.

Next, with regard to method claim 9, the Sato reference fails to teach or suggest all of the features recited in this method claim.

Specifically, Sato at the very least fails to teach or suggest a method which comprises forming a first resist layer by coating a resist composition on a layer to be etched on a semiconductor substrate, wherein the resist composition comprises a hydroxynaphthanlene compound bonded to a hydroxybenzene compound, for similar reasons as discussed above for claim 1. Moreover, as discussed above, Sato is also completely silent regarding using a cross-linker or a thermal acid generator.

Thus, Sato fails to teach or suggest all of the features recited in method claim 9. Therefore, withdrawal of the above rejection to claim 9 is therefore respectfully requested. As claims 10-12 depend from and incorporate all of the limitations from claim 9, withdrawal of the rejection to these dependent claims is likewise respectfully requested.

Lastly, it is further noted that in addition to the reasons set forth above, the rejection to dependent claims 2-6 and 10-12 should also be withdrawn because the Examiner at the very least has failed to factually support a prima facie conclusion of obviousness required pursuant to the U.S. patent laws with respect to any of these dependent claims. **(See MPEP 2142)** In particular, the Examiner has failed to meet the above burden because she at the very least has failed to mention anywhere in the instant Office Action that the Sato reference even teaches or suggest the specific features of the cross-linker (claims 2 and 3) thermal acid generator (claims 4, 5, 6, 11

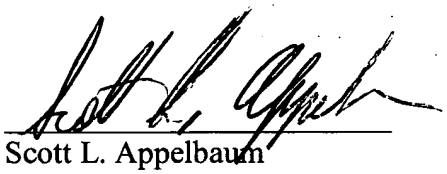
and 12) or the laser (claim 10) recited in the dependent claims. The Examiner appears simply to have rejected dependent claims 2-6 and 10-12 in the instant Office Action in view of the Sato reference without providing any support that the Sato reference actually teaches or suggests any of the above-mentioned specific features recited in these dependent claims.

## III. CONCLUSION

In summary, applicants respectfully submit that the present application is in condition for allowance. Early notice to that end is earnestly solicited.

If a telephone conference would be of assistance in furthering prosecution of the subject application, applicants request that the undersigned be contacted at the number below.

Respectfully submitted,



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